

CLAIMS

We Claim:

1. A decorative material comprising two  
polarizers, having arbitrary directions of their  
5 polarization axes, and phase- shifting plates placed  
between the polarizers, having variable thicknesses or  
different orientations of their optical axes and  
forming a pattern or a mosaic structure. The material  
is distinguished by that the phase-shifting plate  
10 represents a continuous layer of an optically  
anisotropic material containing regions differing by  
the value of phase shift and/or the direction of fast  
optical axis.
2. A decorative material according to Claim 1,  
15 distinguished by that the optically anisotropic  
material represents a molecularly oriented film  
deposited onto an optically isotropic base.
3. A decorative material comprising two  
polarizers, having arbitrary directions of their  
20 polarization axes, and phase- shifting plates placed  
between the polarizers, having variable thicknesses or  
different orientations of their optical axes and  
forming a pattern or a mosaic structure. The material  
is distinguished by that the phase-shifting plate is  
25 represented by a continuous layer of a homogeneous  
anisotropic material, while one or both polarizers may  
contain several elements differing by the directions of  
their polarization axes.

SA 4. A decorative material according to Claims 1 and 3, distinguished by that the anisotropic film is placed in a transparent vessel filled with a transparent or weakly colored liquid medium, while polarizers are placed on the inner or outer surface of the vessel.

5. A decorative material according to Claim 3, distinguished by that one or both polarizers represent a film of molecularly oriented organic substance deposited either immediately onto an optically anisotropic material or onto a transparent sublayer predeposited onto the surface of an anisotropic material.

6. A decorative material according to Claim 5, distinguished by that the molecularly oriented film is represented by a layer of an organic substance comprising lyotropic liquid crystals or thermotropic liquid crystals having the temperature of transition from solid to LC state above the ambient temperature.

7. A decorative material comprising two polarizers, having arbitrary directions of their polarization axes, and phase-shifting plates placed between the polarizers, having variable thicknesses or different orientations of their optical axes and forming a pattern or a mosaic structure. The material is distinguished by that one of the polarizers is replaced by a reflecting surface.

8. A method for the fabrication of decorative materials, including the formation of a mosaic from elements of an optically anisotropic material, placing this mosaic between two polarizers, and fixing the

entire structure by gluing. The method is distinguished by that the mosaic is formed by embossing optically anisotropic polymeric film.

9. A method for the fabrication of decorative materials, including the formation of a mosaic from elements of an optically anisotropic material, placing this mosaic between two polarizers, and fixing the entire structure by gluing. The method is distinguished by that the mosaic is formed by local thermal treatment of the optically anisotropic polymeric film.

10. A method for the fabrication of decorative materials according to Claims 8 and 9, distinguished by that the anisotropic layer transparent in the visible range is obtained using aqueous and aqueous-organic solutions of aromatic compounds absorbing in the spectral range below 400 nm, selected among a series of organic and inorganic salts of alkylbenzene sulfonates, sulfonic acids of the naphthalene series, mono- and polysulfonic acids of the derivatives of benzoimidazole and benzothiazole, anthraquinone, phenanthrene, amino-, hydroxy-, halido-, nitro-, and alkylanthraquinones, benzanthrone, 3-bromobenzanthrone, and water-soluble organic belofores and bleaching agents.